

In the claims:

Please substitute the following full listing of claims for the claims as originally filed or most recently amended.

1. (Currently Amended) An integrated circuit including
a patterned copper layer,
a patterned aluminum layer,
an opening in a layer of material, said opening
extending between a location on said patterned copper
layer and a location on said patterned aluminum layer,
a multi-layer barrier liner in said opening and
having a thickness, said liner extending between said
patterned aluminum layer and said patterned copper
layer at said location on said patterned copper layer,
said multi-layer barrier layer including at least a
first layer being of a material which is conductive and
~~having a reactivity with copper substantially equal to~~
~~or less than~~ has adhesion to copper and tungsten
comparable to that of tantalum or tantalum nitride or
titanium nitride and resists interdiffusion of copper
and tungsten and a second layer formed on said first
layer and being of a material ~~which assists in the~~
~~formation of a stud during deposition of tungsten on~~
which tungsten can be deposited, one or both of said
first and second layers forming a conductive barrier to
process materials which are reactive with copper, and
a stud connection formed of tungsten and located
within said liner.
2. (Original) An integrated circuit as recited in
claim 1 wherein said liner comprises
a layer of tantalum nitride, and
a layer of PVD tungsten.

3. (Previously Presented) An integrated circuit as recited in claim 1 wherein said liner comprises
a layer of tantalum nitride,
a layer of titanium nitride, and
a layer of titanium nitride or PVD tungsten.
4. (Cancelled)
5. (Original) An integrated circuit as recited in claim 1 wherein said patterned aluminum layer includes a layer of at least one of titanium and titanium nitride.
6. (Original) An integrated circuit as recited in claim 2 wherein said patterned aluminum layer includes a layer of at least one of titanium and titanium nitride.
7. (Original) An integrated circuit as recited in claim 3 wherein said patterned aluminum layer includes a layer of at least one of titanium and titanium nitride.
8. (Cancelled)
9. (Original) An integrated circuit as recited in claim 1, further including a covering layer.
10. (Original) An integrated circuit as recited in claim 9 wherein said covering layer includes a layer of silane-based high density plasma oxide.
11. - 16. (Canceled)